



PATENT  
Attorney Docket No.: 47539.30

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	Examiner:
Hiroto Itou	Patrick Mackey
Serial No. 10/651,450	Art Unit: 1756
Filed: August 29, 2003	
Title: Image Forming Apparatus Integrating Sheet Postprocessing Apparatus	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 CFR § 1.131**

We, Hiroto Itou, Kohji Yoshie, Hitoshi Tamura and Hisao Hosoya declare the following:

1. We conceived of or invented the subject matter of the claims in the application identified above prior to August 12, 2002.
2. We have attached a copy of: (a) Japanese version of a Specification for Patent Application dated May 30, 2002; (b) An English translation of the Specification for Patent Application dated May 30, 2002; and (c) A Declaration of the Accuracy of the Translation.
3. The subject matter of the invention was reduced to practice in a diligent manner, as at least shown by the constructive reduction to practice of the invention by filing in the Japanese Patent Office on September 9, 2002.

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4. We further declare that all statements made herein of our own knowledge are true and that all statements made upon information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Hiroto Itou

Hiroto Itou

Executed on this 9 day of May 2006.By: Kohji Yoshie

Kohji Yoshie

Executed on this 10 day of May 2006.By: Hitoshi Tamura

Hitoshi Tamura

Executed on this 10 day of May 2006.By: Hisao Hosoya

Hisao Hosoya

Executed on this 10 day of May 2006.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**DECLARATION OF ACCURACY OF TRANSLATION**  
**IN LIEU OF SWORN TRANSLATION (37 C.F.R. § 1.68)**

The undersigned translator, Masao Mitsuyoshi, serving in a firm of Suzuki International Patent Office located in c/o Chanokiya Bldg., No. 3-1, Nihonbashi-Honcho 2-chome, Chuo-ku, Tokyo 103-0023, Japan, hereby certifies and declares that:

(1) I am fully conversant with both the Japanese language and the English language;

(2) I have translated the Japanese-language document, entitled "SPECIFICATION FOR PATENT APPLICATION prepared on May 30, 2002 by Mr. Hiroto ITO who is one of the inventor of the Japanese patent application filed on September 5, 2002 in the Japanese Patent Office under the Filing No. 2002-259810, into English, the Japanese patent application corresponding to the United States patent application entitled "IMAGE FORMING APPARATUS INTEGRATING SHEET POSTPROCESSING APPARATUS" and filed on August 29, 2003 under Serial No. 10/651,450 in the United States Patent and Trademark Office. A copy of the English translation is attached hereto; and

(3) The attached English translation is, to the best of my knowledge, and belief, an accurate and literal translation from the Japanese language into the English language.

The undersigned, Masao Mitsuyoshi, hereby declares further that all statements herein of my own knowledge are true; and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the matter with which this translation is used.

On this 4th day of April, 2006

  
Masao Mitsuyoshi.

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DEVELOPMENT THEME	NAME OF GROUP	FIELD OF TECHNOLOGY
	Dai-ichi Kaihatsu 5G	

**SPECIFICATION FOR PATENT APPLICATION (MAY 30, 2002)**

**Title: Compatible mechanism for three-fold/Z-fold in postprocessing apparatus of copy machine**

**COMPONENT MATTERS (TO BE ALL ENUMERATED)**

1. Folding mechanism enabling it to perform first, second fold (including folding rollers, enabling to perform knife-fold and buckle-fold)
2. Stoppers, each being possible to move in accordance with a length of a sheet (first and second ones, respectively)
3. Drive mechanism for making a stopping position of a stopper variable on the basis of sheet information (first fold stopper)
4. Operating section for selecting sheet and operation mode

**SCOPE OF CLAIMS FOR PATENT**

A postprocessing apparatus, comprising: two folding portions (for first and second folds) wherein respective fold stoppers are individually driven so as to be stopped at their respective desired positions each corresponding to a size of sheet, thereby realizing the three-fold/Z-fold in the same sheet convey path.

**THE PRIOR ART AND ITS SCOPE**

There is only FS210 of KC as a postprocessing apparatus having a three-fold function. However, the conventional postprocessing apparatus can not perform Z-fold. A folding mechanism is executed by the above described mechanism (a first fold: a knife fold, a second fold: a buckle fold). The Z-fold is performed by another different apparatus (PZ108).

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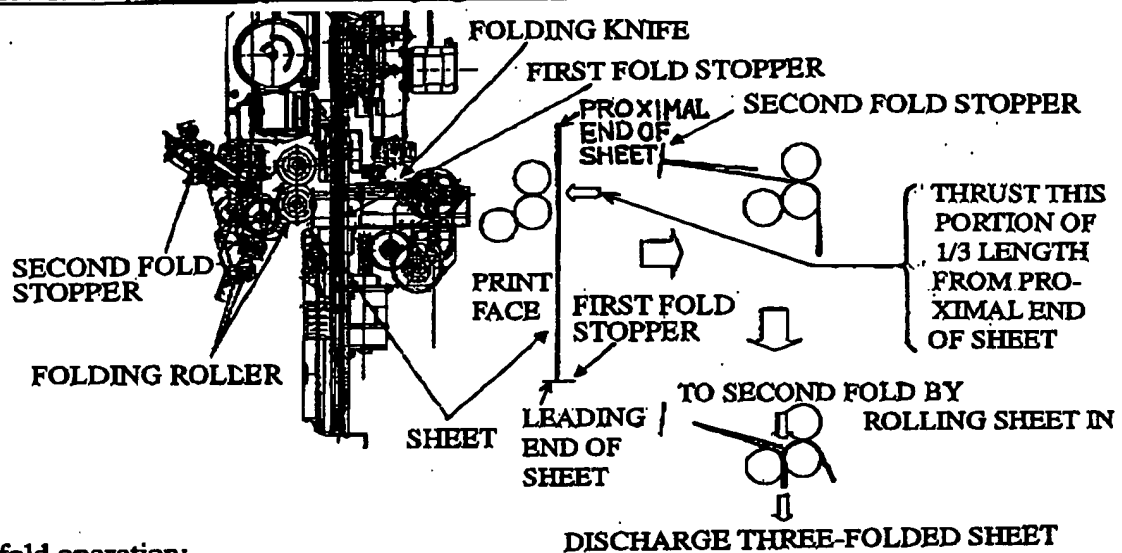
INVENTOR(S)	REFERENCE No.
Hiroto ITO	

**AIM (PROBLEM TO BE SOLVED)**

Two folding modes of a three-fold and a Z-fold are realized by only one folding section in the same sheet convey path without separating a folding section for the Z-fold from another folding section for the three-fold.

**STORY (WHAT IS NEW? WHICH PART IS INVENTION? PLEASE SHOW)**

Three-fold operation (FS210 having a present condition):



Z-fold operation:

- Stop the first fold stopper at a position where a folding knife reaches to a 1/4 sheet position from the leading edge of the sheet.
- Execute the first fold by thrusting the sheet by the folding knife.
- Regulate and stop the second fold stopper so as to be abutted to the folded sheet having a 1/4 length of the original sheet.
- Execute the second fold as is similar to the three-fold. (The position of the second fold corresponds to a 1/2 length of the original sheet.)

Note) Both the first and second fold can perform the knife fold and buckle folds.

**EFFECT**

Though a stapling can be not applied to a Z-folded sheet as compared with a case having the PZ108, the foregoing two folding modes can be realized by the FS210 having a substantially present condition without rising in cost.

It should be noted that it becomes possible to be used jointly with a puncher disposed upstream this apparatus.

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開発テーマ名	グループ名	技術分野
	第一開発 5G	

## 出願明細仕様書 (2002年 5月30日)

名称：複写機の後処理装置における三折り／Z折り両立機構

### 構成要件 (すべてを列挙する)

1. 第1、第2折り可能な折り機構（折りローラを含む、ナイフ折り・バックル折り共に可）
2. 用紙長さに応じ移動可能なストッパー。（第1、第2各々）
3. 用紙情報によりストッパー位置を可変に動作させる駆動機構（第1折りストッパー）
4. 用紙・モードを選択するための操作部

### 請求範囲

複写機の後処理装置で、2か所の折り部（第1折り、第2折り）を有し、各々の用紙折りストッパーが独立駆動する事で、各サイズに対応した位置に停止し、三折り／Z折りを同一の搬送経路内で実現することを特徴とする。

### 従来技術とその範囲

複写機の後処理装置として三折り機構を有するものは、KCのFS210のみであるが、Z折りは未対応。折り機構は上述の機構にて実施。（第1折りーナイフ折り、第2折りーバックル折り）Z折りは別装置（PZ100）にて実施している。

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2006年 4月 4日 17時23分

鈴木国際特許事務所

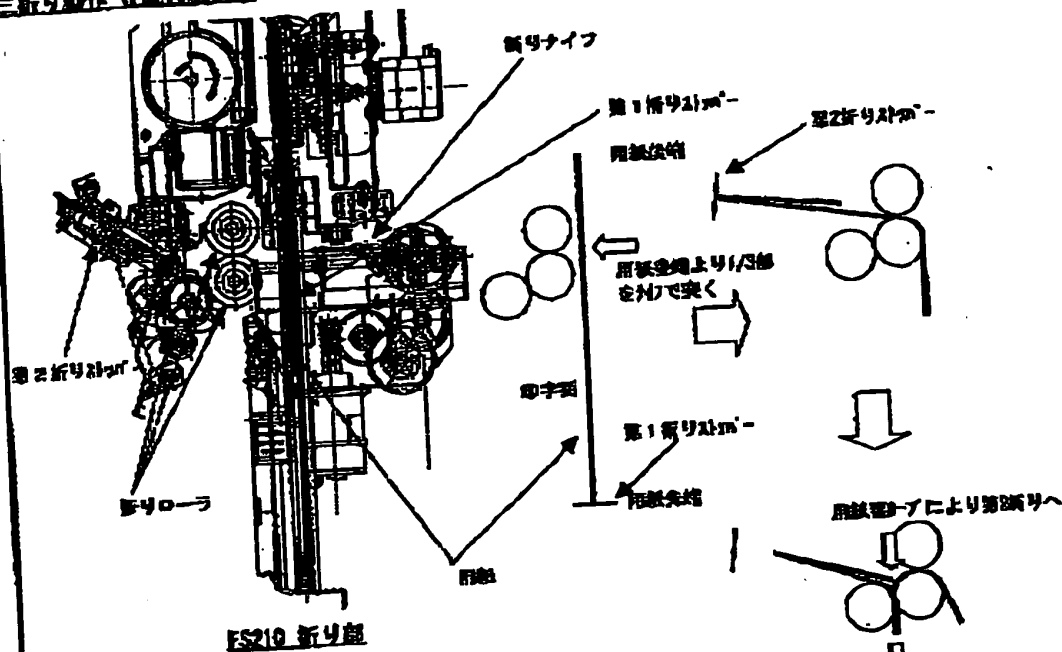
発明者	発明 No.
伊藤 弘人	

## 目的 (解決すべき課題)

三折り/二折り各々の折り部を有せず、1つの折り部と同一の搬送経路内で、2つの折り方式を実現する。

ストーリー (何が新しいか、どこが発明か、図解せよ。)

## 三折り動作 (FS210現状)



## 二折り動作

- 上記第1折りストップ位置を折り位置が用紙先端1/4位置になる所で停止
- 折りで突く事により、第1折りを実施。
- 第2折りストップは、用紙1/4長さが突当たる所で調整・停止。
- 三折り同様第2折りを実施。(第2折り位置は用紙1/2長さ位置)

注) 第1折り、第2折り共に、折りでも折りでも可

## 効果

PZ108装着時に対し、二折り紙の送り出しは出来ないが、FS210現在型状の構成で送り出し無しにて、2つの折り方式が実現可能。  
尚、記述無しではあるが、装置上流にあるパンとの併用は可能。

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